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- To prevent Plaintiff and other manufacturers of SRAM from having access to 2. information necessary to compete in the rising market for Networking SRAM, Defendant and its two principal competitors entered into a combination and conspiracy in restraint of trade, which they named the "QDR Consortium" (the "Consortium"). The purpose and intent of the Consortium was to develop standards for Networking SRAM products outside of the open and public standard setting organizations to enable them to get to market before their competitors by exchanging information and agreeing on product standards for their respective products to exclude their existing and new competitors from the market. As a result, the Consortium's competitors, including GSI, were not able to contribute to the standard setting effort and did not have access to specifications and information they would have had in an open standard setting process, such as those conducted by the Institute of Electrical and Electronics Engineers ("IEEE") or the JEDEC Solid State Technology Association ("JEDEC")—the industry recognized standards-setting organizations for memory components. Rather, the Consortium members coordinated their product development by agreeing among themselves on standards that were not available to their competitors.
- 3. JEDEC is a leader in developing pro-competitive, open standards for the microelectronic markets, particularly the memory market, and, at the time the Consortium was formed, had a committee charged with the role of developing standards for SRAM. Open standards, such as those promulgated by JEDEC, IEEE and other less formal open standards organizations reduce product vendors' risk by facilitating market acceptance of new technologies, reduce purchasers' risk by facilitating the development of multiple sources of supply for critical

- 4. In an open and public standard setting process, all competitors in the market have equal access to the same information, but most critically, have access to that information at the same time, allowing not only for competitive products but also competitive product introduction schedules. While a vendor has the option to pursue its own unique product development without engaging in open standard setting activities, here the collusion among market entrenched members of the Consortium was with a concerted and anticompetitive intent to reap the benefits of standardization among themselves in order to dominate and control the lucrative emerging market for Networking SRAM by excluding other competitors.
- 5. Since purchasers only derive benefit from the standardization process if the products produced have virtually identical form, fit and function, vendors of products with identical cost and performance characteristics that differ from the "standard" product even in minor ways cannot effectively participate in the market. The Consortium was formed to assure that the members would each have access to specific form, fit and function information that was particular to their planned family of Networking SRAM products. The Consortium's purpose was to protect their members' SRAM market shares by excluding their competitors from having access to information describing the specific form, fit and function specifications and information that would otherwise be available in an open and public standards setting body such as JEDEC or IEEE. Their illegal combination and conspiracy permitted the Consortium members to control the market by keeping Networking SRAM prices high, locking in the limited number of consumers of Networking SRAM before competitors could develop and market competing products and stalling the introduction of innovative competitive products.

6. GSI has suffered injury by Defendant's and its co-conspirators' conduct, competition has been harmed and consumers have been denied the benefits of innovation in product development and lower prices.

THE PARTIES

- 7. Plaintiff GSI Technology, Inc. ("Plaintiff" or "GSI") is a Delaware corporation with its principal place of business in Sunnyvale, California. GSI is in the business of designing, manufacturing and selling high performance memory including fast synchronous SRAMs ("Fast SRAMs") and Low Latency Dynamic Random Access Memory ("LLDRAMs"). Development and technical support activities are conducted primarily in California and Texas. GSI's SRAM die are fabricated in Taiwan and the United States and then sent to GSI facilities in California and Taiwan for final testing and shipment.
- 8. Defendant Cypress Semiconductor Corporation ("Defendant" or "Cypress") is a Delaware corporation with its principal place of business in San Jose, California. Cypress operates several business units including one focused on high performance Fast SRAMs. On information and belief, Cypress SRAM die are fabricated in the United States and at various locations worldwide. At all relevant times, Cypress has functioned as the leader and principal member of the Consortium and claims to have trademark rights in the generic description "quad data rate" and the descriptive "QDR" acronym, which are used by Cypress and all Consortium members to prevent their use by GSI and others.

CYPRESS' CO-CONSPIRATORS

- 9. At various times, the following entities participated as co-conspirators with Cypress in connection with the illegal and anticompetitive conduct alleged in this Complaint, and each has acted in furtherance of the conspiracy:
- (a) Micron Technology, Inc. ("Micron"), a Delaware corporation with its principal place of business in Boise, Idaho, and/or its wholly-owned subsidiary, Micron Semiconductor Products, Inc., participated in the formation of the Consortium in February 1999 and in the conspiracy until it withdrew from the SRAM market in 2003.
 - (b) Integrated Device Technology, Inc. ("IDT"), a Delaware corporation with

its principal place of business in San Jose, California, participated in the formation of the Consortium in February 1999 and in the conspiracy.

- (c) NEC Corporation ("NEC"), organized under the laws of Japan, with its principal place of business in Nakahara-Ku, Kawasaki, Kanagawa, Japan, and/or its wholly-owned and controlled subsidiaries, NEC Electronics Corporation and NEC Electronics America, Inc., joined the Consortium and the conspiracy in January 2001. NEC merged with Renesas Technology Corporation in April 2010.
- (d) Samsung Electronics Company, Ltd. ("Samsung"), a business entity organized under the laws of South Korea, with its principal place of business in Seoul, Korea, and/or its wholly-owned and controlled subsidiaries Samsung Electronics America and Samsung Semiconductor, Inc., joined the Consortium and the conspiracy in April 2001.
- (e) Hitachi, Ltd. ("Hitachi"), a business entity organized under the laws of Japan, with its principal place of business in Tokyo, Japan, and/or its wholly-owned and controlled subsidiary Hitachi America, Ltd. joined the Consortium and the conspiracy in September 2001.
- under the laws of Japan with its principal place of business in Tokyo, Japan (now known as Renesas Electronics Corporation) joined the Consortium and the conspiracy in April 2003. Renesas Technology Corporation was established in April 2003 as a joint venture between Hitachi, Ltd. and Mitsubishi Electric Corp. Renesas Electronics Corporation is the successor of a merger between NEC and Renesas Technology Corporation in April 2010.

JURISDICTION AND VENUE

- 10. This Court has subject matter jurisdiction under 28 U.S.C. § 1337 and 28 U.S.C. § 1331, as this action arises under Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1 and 2, and Sections 4 and 16 of the Clayton Act, 15 U.S.C. §§ 15(a) and 26. This Court has supplemental subject matter jurisdiction of the pendent state law claims under 28 U.S.C. § 1367(a).
- 11. Venue is proper in this judicial district under 15 U.S.C. § 22 as Cypress is found and transacts business in this district, many of the acts and omissions that give rise to the claims

in this action occurred in this district, and the damages were suffered by GSI in this district.

INTRADISTRICT ASSIGNMENT

12. This action is appropriate for assignment to the San Jose Division or San Francisco Division of this Court as both plaintiff and defendant are found and do business in both counties and are headquartered in Santa Clara County.

BACKGROUND OF THE SRAM MARKET

- 13. From it's inception until the late-1990s, the SRAM market was dominated by consumer market applications (slow and/or low power SRAMs) and the computer market (Fast SRAMs). From the mid-1980's until the late-1990's, Fast SRAMs mainly served as external cache memory supporting high-end microprocessors. For a brief period as Intel's Pentium and Pentium-II processors moved into the consumer market space, the Fast SRAM market was characterized by a sudden and dramatic increase in demand. The increased demand spawned a surge in the number of SRAM vendors as well as a surge in SRAM unit volume. In the late 1990s, as Pentium-II demand began to wind down in the face of new processor offerings that included cache memory on the processor die, the high-end Fast SRAM market for RISC processor external cache also entered a significant decline for the same reason.
- 14. At about the same time, telephone networks that were converting from synchronous transmission protocols to ATM (Asynchronous Transfer Mode) were driving early demand for what would later become known as "networking memory." The demand for growth in Internet bandwidth now drives the demand for memory in the networking market space which continues to grow to this day. The workloads that networking systems place on memory resources are very different from the workloads placed on memory devices in the computer market, and that has resulted in the need for new memory architectures that are suited to the workloads presented by the networking market. The formation and exclusionary practices of the Consortium ultimately contributed to numerous SRAM vendors exiting the market by blocking timely access to standardization efforts aimed at addressing the needs of the emerging Networking SRAM market. As a result, there has been a severe contraction of the SRAM vendor base over the last decade.

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THE TECHNOLOGY OF SRAM AND THE SRAM MARKET

The products at issue in this action are the initial and succeeding generations of 15. networking market-oriented fast synchronous Quad Data Rate ("Quad" or "QDR") and Double Data Rate ("DDR") SRAM (collectively "Networking SRAM"). All types of high-performance internet and intranet communication systems incorporate Quad and DDR SRAMs, particularly networking equipment such as switches and routers. Networking SRAMs are designed to improve various performance characteristics critical to networking applications including transaction rate and data bandwidth beyond that of other or previous SRAM devices. Increased transaction rate and data bandwidth are essential to improving the performance of switches and routers that require high-performance access to look-up tables, linked lists and buffer memory. Quad SRAMs have dual unidirectional Double Data Rate input and output ports and come in versions optimized for improved transaction rate and versions optimized for high data bandwidth. DDR Common I/O (in/out) SRAMs from the same family feature a single bidirectional DDR data port and are optimized for read-dominated operations such as table look-ups. In each product family the use of the DDR data transfer protocol maximizes data transfer rates per pin and reduces the number of pins required to connect the RAM to a host device. As the demand for Internet bandwidth continues to grow, the need for regularly doubling the performance of networking memory continues to grow and presents a compelling need for open standardization.

elements, each of which holds a "bit" of data. The pervasive use of personal computers has made DRAM (Dynamic Random Access Memory) a familiar term. DRAM memory is very dense and very low cost but relatively slow. SRAM memory also stores data in arrays of single storage elements, but SRAM bits are approximately 10 times larger than DRAM bits which results in SRAMs being much more costly than DRAMs on a per-bit basis. Historically SRAM arrays have offered specific advantages due to their simplicity and low power. However, for a variety of reasons, including the difference in memory cell design, SRAMs are favored because they can be 10 times or more faster than DRAMs. As a result, it is common to see Fast SRAMs used in applications for which speed is critical and the higher cost justified.

- 17. Networking SRAMs are Fast SRAMs that have been specifically optimized to address particular networking system needs. Because there are at least three major memory applications in networking systems, and because the networking market presents a variety of price/performance objectives, several networking memory products have been developed to address those needs. As a rule, SRAM vendors attempt to put all of the versions that fall within a given price/performance class into a single networking SRAM die design and then through various methods deliver each of the distinctive products required (e.g. Quad Burst of 2, Quad Burst of 4 and DDR Burst of 2 SRAMs) from the base die design. For this reason, early access to standardization information for all versions is critical to the design of a cost effective die and competitive participation in the market.
- 18. At the time the Consortium was formed in 1999, Cypress and its co-conspirators each operated their own manufacturing facilities called fabrication plants or "fabs" as did other SRAM vendors. GSI and some other SRAM vendors outsourced the fabrication process to third parties, generally known as "foundries." Today, most integrated circuit ("IC") vendors use foundries or, like Cypress, use a mix of foundry and internal fabs. These fabrication plants use photolithographic and other processes to create ICs on silicon wafers. Many more than one IC or die are printed on each wafer.
- 19. Manufacturers of modern integrated circuits seek to produce transistors that strike the right balance between speed and power for their intended application while making the transistors and the associated electrical interconnect as small as possible. Over time, the semiconductor industry has sought to reduce the size of transistors and the associated interconnect and have been rewarded with higher performance and lower power ICs. However over the last decade the degree of improvement available from shrinking feature sizes has been diminishing and in some cases reversing as parasitic electrical effects that could once be ignored have begun to dominate circuit performance. As a result, as silicon technology has progressed over the last decade, performance improvements from silicon technology alone have not been able to keep pace with market demand, and architectural innovation has become the primary contributor to adding value and improving IC performance. This has been particularly true for networking

memory, which has made the need for open standards for SRAM products all the more acute.

THE RELEVANT MARKET

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The relevant geographic market is worldwide. 20.

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interstate commerce from 2001 to date.

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- The relevant product market is the initial and succeeding generations, including 21. roadmaps and migration paths, of pin-and-function-compatible Quad and DDR SRAMs (Networking SRAMs) that were designed, developed, fabricated, packaged and have been sold in
- The comprehensive portfolio of the Quad and DDR SRAM product family consists 22. of five closely related Networking SRAM architectures. The product family includes, without limitation, Quad Data Rate Burst 2 ("Quad B2"); Quad Data Rate Burst 4 ("Quad B4"); Double Data Rate Common I/O, Burst 2 ("DDR B2"); Double Data Rate Common I/O, Burst 4 ("DDR B4"); and Double Data Rate Separate I/O, Burst 2("DDR SIO B2"). Each architecture can include versions with data input and output bus widths of 8, 9, 18 and 36 bits. Over the years, Quad and DDR SRAMs have been upgraded with a series of functional refinements to form, fit and function aimed at improving device performance. These have been marketed by the Consortium as QDR/DDR (the original generation), QDR/DDR II (second generation), QDR/DDR II+ and recently QDR/DDR II+ Xtreme (refinements or enhancements). The Quad and DDR SRAMS in the various forms offered by the QDR Consortium members are the de facto industry standard for Networking SRAMs and the SRAM market as a whole.
- Plaintiff is informed and believes and based thereon alleges that the Consortium 23. developed each of the above evolutionary product changes in secret, releasing information to customers under cover of Non-Disclosure Agreements so that buyers could be ready to accept the new versions of the devices before non-Consortium competitors could learn of the existence or design of the new versions until they were released. Plaintiff is further informed and believes and based thereon alleges that by signing the Consortium's Non-Disclosure Agreements, customers could not describe the specifics of what they wanted to buy in the future to other competing vendors. These practices were intended to, and did, keep competitors of the Consortium from having sufficient information to develop timely competing products.

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| 24. The market for Networking SRAMs consists of a small number of customers who |
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| have a need for a specialized high performance memory. Quad and DDR SRAMs are purchased |
| primarily by manufacturers of communications networking equipment such as routers and |
| switches, but as they have become the de facto standard Fast SRAMs, they are also being used in |
| military, medical and industrial products as well. Because of the small number of purchasers in |
| the Fast SRAM market, early market entry is a critical success factor for a networking memory |
| vendor. The opportunity to get a jump on the market allows a vendor of a new device to lock in |
| the few purchasing customers and exclude its competitors from the market. |

The high cost of developing Networking SRAM products is a major barrier to 25. entry. The lifespan of a generation of routers and switches is typically five to ten years. A design win (i.e. acceptance of a new product design) early in the life of a new program can present a virtually unassailable advantage to the first suppliers of a particular networking memory device creating a substantial and additional barrier to entry into the Fast SRAM product market. For example, Cisco Systems, Inc. ("Cisco") has a substantial share of the high-performance networking products market (e.g. routers and switches). Once a manufacturer such as Cisco selects two or three vendors for the memory in a particular program, the vendors become locked in to that program for years. Thus, vendors who enter the market late are generally excluded by the lock-in relationship that perpetuates itself. The end result is that delayed market entry by as little as a few months means that otherwise competitive vendors who were excluded from the program because they could not present a device that was form, fit and function compatible within the customer's design-in window cannot expect to gain acceptance for a decade or more unless one or more of the entrenched vendors fails or exits the market.

FORMATION OF THE CONSORTIUM AND ITS ANTICOMPETITIVE CONDUCT

Cypress, its co-conspirators, and other SRAM vendors, including GSI, recognized 26. the significant new opportunity presented by the emerging networking market and the need for new SRAM products designed to meet the needs of that market. Cypress and its co-conspirators seized that opportunity to form the Consortium with the objective of establishing unfair control

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over the emerging Networking SRAM market through exclusion of U.S. and foreign vendors from the standardization activities that all vendors had recognized over the preceding two decades as critical to effective SRAM market participation.

- In February 1999, Cypress, IDT and Micron formed the QDR Consortium to bypass the rules and procedures of open standards organizations such as JEDEC. Consortium initially was a combination of these three competitors whose purpose was to define and develop new networking SRAM architectures, ultimately marketed as QDR and 165 pin DDR SRAMs, while excluding other competitors interested in participating in networking SRAM standards development. The Consortium was organized and operated in a manner separate and apart from, and without any supervision by, any industry recognized standards-setting organization, such as JEDEC, for the purpose of obtaining a competitive advantage over other competitors and eliminating them from the market. The Consortium members did so by jointly combining their market power to define and promote a family of SRAMs that would address the readily apparent requirements of the networking market with devices that had sufficiently different and secret external characteristics (i.e. collectively known as form, fit and function compatibility) to block timely sourcing by otherwise competitive vendors. The evaporation of SRAM standardization activities at JEDEC over the last decade in the face of clear demand for higher performance networking SRAMs to support the growing networking market is a direct result of the effectiveness of the anticompetitive activities and conduct of the Consortium and continues to injure GSI, other Fast SRAM competitors, competition and the industry at large.
- 28. At its inception, the Consortium limited its membership to the smallest number of Fast SRAM vendors necessary to create and maintain a de facto standard while excluding vendors that presented too great of a competitive threat. Despite GSI's continuous requests for open membership and participation by others, the Consortium excluded GSI and other SRAM vendors that operated using foundries for wafer fabrication, which was perceived at the time as a significant competitive cost advantage. This exclusionary agreement and combination among the Consortium's members was designed to gain a critical development and marketing advantage over their other competitors in order to corner the market for Networking SRAM, to increase their

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respective market shares, to retain high prices and to dominate and control the market for Networking SRAM products.

- 29. In late July 1999, Cypress, IDT and Micron announced the formation of the Consortium, and GSI, as a producer of SRAM products, approached the members and requested that it be granted membership. In response, Cypress notified GSI that it would not be permitted to join the Consortium or participate in the Consortium's standards development.
- Consortium members bypassed JEDEC's standard setting subcommittee for 30. SRAM, which would have enabled all competitors in the SRAM market to have equal and timely access to information and the benefit of its rules. JEDEC rules require, as a condition of committee membership or committee participation (defined as being present in a committee or task group meeting), that each member or participant agree to abide by JEDEC rules and procedures, including its Patent Policy, to disclose and offer to license the member's/participant's potential essential patent claims on reasonable and non discriminatory ("RAND") licensing terms and conditions. After being excluded from the Consortium led by Cypress, in October 1999 GSI, IBM, Samsung and Motorola started a separate group known as "SigmaRAM" to facilitate the design and development of an open Networking SRAM standard. By February 2001, participants in SigmaRAM included GSI, Mitsubishi, Sony, Samsung and Toshiba. Unlike the Consortium members, the participants in SigmaRAM immediately and actively sought participation of any and all companies (vendors and users) who were interested in participating. The SigmaRAM participants submitted design specifications of a SigmaRAM product to JEDEC in March 2000 in compliance with JEDEC's standard setting process.
- 31. On January 10, 2000, the Consortium announced that it had completed the initial design of its first QDR and DDR SRAM products and that it intended to define the initial roadmaps and migration paths for this first generation. The Consortium members had conspired among themselves beyond simple data sheet compliance by sharing design simulations, test vectors, test methodologies, characterization plans and common packaging support to design the first generation of QDR products without the oversight, participation or timely public disclosure of any industry standards-setting organizations and to the exclusion of its members' competitors.

- 32. On February 16, 2000, concurrent with the first product shipments, the Consortium announced that it had completed the specifications of its initial QDR and DDR SRAM architectural design and that data sheets would be available to potential customers. Complete and accurate data sheets, released publicly in a timely manner, were essential to the ability of competitors to provide competing products in a timely manner. The timely and ongoing publication of data sheets was a common practice during the traditional "open" standard setting process, but it was not followed by the Consortium.
- QDR and DDR SRAM, it regularly published those data sheets only after a sufficient time delay that would provide the Consortium members a distinct "time-to-market" competitive advantage over all other SRAM vendors. It typically took 12 to 24 months to bring a competitive product to market after access to complete and detailed data sheets. The Consortium further compounded the injury to competitors by publishing only minimally complete data sheets that left numerous significant items undefined or ambiguously defined. As a result, the Consortium created a barrier to market entry that excluded its competitors for one to two years, thereby assuring Consortium members a generational lock in with Cisco, other major networking equipment manufacturers, network processor vendors and Field-Programmable Gateway Arrays ("FPGA") vendors.
- 34. Although by 2001 the SigmaRAM participants' efforts at JEDEC were gaining recognition in the industry press, on January 10, 2001, Cisco announced its decision to use the Consortium's Quad SRAM offered by Cypress under the name "QDR SRAM" in a new high volume router program rather than a SigmaRAM product offered by GSI. Shortly thereafter, the Consortium (Cypress, IDT and Micron) announced that NEC, a vendor with minimal presence in the U.S., was joining the Consortium on January 29, 2001, and on April 2, 2001, the members of

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the Consortium (Cypress, IDT, Micron and NEC) announced that Samsung had withdrawn from SigmaRAM and had joined the Consortium. Although Samsung continued to develop and sell SigmaRAM products to select programs at Cisco, Plaintiff is informed and believes that Samsung's membership in the Consortium was granted on the condition that Samsung drop all public use, promotion or attribution of the SigmaRAM name in association with its SigmaRAM products to prevent further market acceptance of SigmaRAM competitive products.

- On June 14, 2001, the Consortium announced the development of the QDR II and 35. DDR II SRAM architecture and that sample devices were already under evaluation. Consortium also announced an "optimum packaging strategy," which is critical to product interchangeability. At the same time, Cypress publicly stated that with QDR II SRAM it had defined its QDR product "family" for the next two and one-half years and further stated that by that time it would be introducing its QDR III SRAM, signaling further exclusionary efforts by the Consortium were underway.
- On September 24, 2001, the members of the Consortium (Cypress, IDT, Micron, 36. NEC and Samsung) announced that Hitachi was joining the Consortium. The announcement emphasized that each member of the Consortium "used its own state-of-the-art fabrication facility," a factor that provided no justification for an anticompetitive conspiracy. Industry analysts estimated that the six members of the Consortium would supply two-thirds of the worldwide unit shipments of Fast SRAM. By December 2001, Motorola and IBM had both withdrawn from the Networking SRAM market.
- On October 15, 2001, the Consortium announced the release of data sheets for the 37. QDR II and the DDR II SRAM architectures. Again, the release of the data sheets months after compliant devices already existed was time-delayed and devoid of essential details, to the detriment of all other competitors.
- Between November 1, 2001 and August 30, 2002, Cypress and the other members 38. of the Consortium proposed and aggressively promoted adoption of the Consortium's ODR interface to the NPF (Network Processors Forum) Look-Aside Interface working group. The Look-Aside Interface was intended to facilitate connection of SRAMs, CAMs and other

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networking devices to network processors. GSI and Sony proposed accommodation of performance improvement features present in the SigmaRAM interface. Although the first release of the LA-1 interface standard accommodated the characteristics of both the QDR and SigmaRAM interfaces, subsequent releases under the editorial direction of Cypress omitted references to SigmaRAM while retaining the SigmaRAM contributions which had since been incorporated into the QDR II and DDR II specification.

- On October 8, 2002, representatives of GSI and Sony met with a "representative of 39. Micron" with the expressed intent of persuading the Consortium to open and unify future Networking SRAM standardization efforts. Their efforts were unsuccessful, and SigmaRAM ceased to provide an alternative forum to the QDR Consortium by the end of 2002.
- On March 11, 2003, Micron formally announced that it was exiting the SRAM 40. market, and it accordingly withdrew from the Consortium. GSI again took the initiative to contact Cypress about opening the Consortium to GSI and other interested parties. On March 13, 2003, Cypress notified GSI that it was not willing to alter the closed operations of the Consortium and that it would not accept GSI as a member.
- On January 15, 2004, GSI representatives had another meeting with Cypress 41. representatives to discuss a request by GSI for membership to participate in the Consortium's standard setting. On May 6, 2004, Cypress sent a letter to inform GSI that its membership and participation would not be accepted. According to the Cypress letter, "[A]dding more members at this time would have minimal benefit and simply increase the time to closure on technical Since the Consortium had just lost its largest QDR supplier (Micron), Cypress' issues." justification for denial of GSI's membership was motivated by its anticompetitive and exclusionary intent to retain Micron's market share for itself or for all members of the Consortium.
- On June 10, 2004, the Consortium announced plans for its third generation of 42. QDR SRAM-QDR-III SRAM, a device that was never produced by Cypress or any other member of the Consortium. The announcement that the Consortium members were developing ODR III SRAM was intended to delay competitive product development and to keep customers

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| from switching to competitive products. To this day, neither Cypress nor the other members of |
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| the Consortium have introduced or sold a QDR III product. Instead, the Consortium's QDR III |
| propaganda was "vaporware"—specifically intended to paralyze its competitors and preclude |
| them from developing their own new generation devices. This anticompetitive strategy proved to |
| be extraordinarily effective since the research and development costs associated with a new |
| generation device would approach \$3 to \$5 million, and neither GSI nor other competitors were |
| prepared to risk such a capital investment only to discover that the Consortium's expected |
| QDR III device, when released, was not pin-function compatible. Such a development would |
| simply compound the "time-to-market" competitive injury already being suffered by GSI and |
| other Networking SRAM vendors who were excluded from the Consortium. |

- 43. On March 9, 2006, the then-members of the Consortium (i.e. Cypress, Samsung, IDT, NEC and Renesas) announced that they were releasing enhanced QDR II and DDR II products described as ODR II+ and DDR-II+ SRAM, but in keeping with previous practice, data sheets were not publicly available.
- In March and April of 2007, the industry members of the JEDEC SRAM 44. committee, which included Cypress, IDT, NEC, Samsung, Renesas, GSI and Sony met to discuss the prospect of reviving open, public future SRAM standardization efforts under the auspices of JEDEC. In response, the Consortium informed the SRAM committee that, while their members would be willing to attend meetings in which GSI, Sony and other SRAM vendors would present their respective proposals for an industry standard, the Consortium members would not make any presentations concerning their developmental efforts.
- 45. In October 2008, GSI again requested membership and open standard setting and Cypress rejected its request.
- GSI is informed and believes and based thereon alleges that in January 2011, 46. Cypress and the Consortium members advised customers that planning is underway to define and produce a "QDR IV" device. The Consortium's announcement of a QDR IV generation is, like its announcement of the QDR III generation that has not yet been introduced, intended to prevent customers from switching to competitors' products.

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GSI is informed and believes and based thereon alleges that in or around late 2010 47. or early 2011, Samsung ceased development of new Networking SRAMs. In 2010, Cypress surpassed Samsung as the largest Networking SRAM supplier.

In January 2011, the Consortium again rejected GSI's request for admission to the 48. Consortium and open standard setting. Yet, on July 15, 2011, Cypress and Renesas, the only remaining Consortium members, via the QDR Consortium's website invited memory manufacturers and customers to apply for non-voting "Adopter" and "Adviser" memberships in the Consortium to obtain and enjoy the benefits of participating in "the definition of performance specifications and features that will support customer roadmaps;" increase the "likelihood of producing a superior product specification;" increase "the likelihood of producing successful products . . . for leading edge products that are multi-sourced;" and "developing working relationships with other industry forums. . . . "

THE CO-CONSPIRATORS ACTS IN FURTHERANCE OF THE CONSPIRACY

- From its inception in February 1999 to and including the present date, the 49. Consortium was organized and continuously operated as an illegal horizontal combination and conspiracy between and among direct competitors to restrain trade and monopolize or attempt to monopolize the Networking SRAM product market. The purpose of the Consortium and the intent of its members was to eliminate or obtain a competitive advantage over their other competitors by jointly combining its members' market power to create exclusive but de-facto Networking SRAM standards and to manipulate the availability of information about those product definitions in such a way as to delay substantially their competitor's entry into a market in which customers highly favor products with more than one source.
- From the Consortium's inception in February 1999 to and including the present 50. date, its members knowingly engaged and participated in a continuous and unceasing series of new and independent illegal overt acts that were directly intended to further the illegal purposes of the conspiracy and to accomplish its ultimate goal of monopolizing the market for Networking SRAM. Each such independent overt act inflicted new and accumulating anticompetitive damage

and injury to GSI and the industry at large, which injuries are continuing to be suffered, to and including the present date.

- 51. The independent, continuous and illegal overt acts undertaken by the Consortium in furtherance of the conspiracy include, without limitation, the following:
- (a) The Consortium was formed primarily by Cypress, and it intentionally limited membership in the Consortium to SRAM vendors who posed a limited competitive threat. Despite continuous requests for open membership and participation by GSI and other competing SRAM vendors, the Consortium specifically excluded them from the Consortium and from open standards setting for Fast SRAM;
- (b) From the time of the Consortium's inception in 1999, and in the years thereafter, GSI requested that it be accepted as a member to participate in Networking SRAM standards development with the Consortium members, and on each occasion Cypress, on behalf of the Consortium, denied GSI's requests for membership and participation in the Consortium's standard setting efforts and timely access to the standards being developed by the Consortium. GSI's request for participation and its rejection occurred most recently in January 2011.
- (c) Plaintiff is informed and believes and based thereon alleges that, pursuant to their exclusionary agreement, the full terms of which are presently unknown, Cypress had, and exercised, a veto over GSI's numerous requests, including requests in 1999, 2003, 2004, 2008 and 2011, to be admitted to membership or participation in the Consortium and for the Consortium to engage in open standard setting through JEDEC's SRAM subcommittee or any other open standard setting process.
- (d) The Consortium members exclusionary agreement constituted a group boycott and/or concerted refusal to deal that afforded the Consortium the opportunity to exclude their competing SRAM vendors and to prevent them from entering the Networking SRAM market on a timely and competitive basis;
- (e) Plaintiff is informed and believes and based thereon alleges that the Consortium members regularly and continuously communicated with one another by telephone, email or meetings throughout the entire conspiratorial time frame for the purpose of furthering

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and achieving the illegal purposes of the conspiracy, including without limitation, excluding competitors, sharing proprietary research and development information among themselves in a manner that exceeded simple data sheet compliance, delaying publication of data sheets and omitting critical information and data until they had initial and new generation products market-ready to lock-up customers before competitors had access to standards necessary to develop and market competing products;

- (f) The Consortium selectively added new members to its conspiracy when compelled to do so by circumstances that threatened to compromise the effectiveness of the Consortium (e.g. when the participation of Samsung in SigmaRAM was giving SigmaRAM too much credibility) or when the geographic market footprint of the competitor was minimal in the U.S. market and its participation could enhance the image of the Consortium (e.g. the inclusion of Toshiba / Renesas / NEC);
- As a direct result of its exclusionary combination and conspiracy from (g) 1999 to and including the present date, the Consortium collectively designed, developed, manufactured and introduced generations of its QDR and DDR SRAM and several enhanced product family devices into the market free of any timely and effective competition from any other networking SRAM vendors. Its initial QDR and DDR SRAM was announced in February 2000 concurrent with its first product shipments and public release of data sheets. The next generation, QDR II and DDR II SRAM, was announced in June 2001 concurrent with release of early samples to customers, but QDR II and DDR II data sheets were not made public until October. In May 2004 the Consortium previewed the QDR III and DDR III without releasing any significant details about the device. The Consortium announced the QDR II+ and DDR II+ in March 2006 but did not make data sheets available to the public. Over the next four years, Consortium members sampled a succession of variants on the QDR II+ and DDR II+ theme, each altering elements of the device definition, keeping the public definition of a QDR II+ and DDR II+ in flux until late 2010. Variants were released without public announcement, but in each case delivery of products to customers predated public release of data sheets. The most recent enhancement is the Consortium's "QDR II+ Xtreme" SRAM, which is scheduled to

of the Networking SRAM market.

(i) The Consortium and its members have repeatedly refused numerous requests to operate as an "open" forum of competitive SRAM vendors or under the auspices and supervision of an industry recognized standards setting organization, such as JEDEC, even though all Consortium members are members of JEDEC.

by avoiding JEDEC's RAND and Patent Policy, the Consortium attempted to further its control

- 52. In addition to these acts and in furtherance of the conspiracy, in February 2002, Cypress filed an application with the U.S. Patent and Trademark Office to register "QDR" as a trademark. The application claimed that Cypress had used "QDR" since June 30, 1999. The Trademark Office issued an Office Action on June 17, 2002, refusing to register "QDR" as a trademark because it did not "function as a mark," and because it was "merely descriptive" of a generic group of products and not sufficiently distinctive to merit registration. Between September 10, 2002, and June 3, 2005, Cypress sought reconsideration of two Office Actions that rejected its application to register "QDR" as a mark. On June 3, 2005, the Trademark Office issued its Final Refusal denying Cypress' last request for reconsideration. Notwithstanding the Trademark Office denial of trademark protection, Cypress and members of the Consortium continued to claim QDR as a trademark for their Networking SRAM products in order to gain a market advantage over their competitors and to preclude their competitors from using the acronym QDR in describing their competing products to the injury and damage of GSI and other competitors.
 - 53. On August 3, 2005, Cypress amended its trademark application requesting that

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- 54. On December 3, 2010, Cypress filed a new application to register QDR as a trademark on the Principal Register, contending that the mark had become distinctive of the goods through Cypress' exclusive and continuous use of the mark for at least five years. Such exclusive and continuous use was gained by false representations that QDR was a valid trademark of Cypress and/or members of the Consortium. The Trademark Office issued an Office Action on March 10, 2011 rejecting Cypress' application on the ground that the proposed mark was "merely descriptive" and not distinctive and had not acquired distinctiveness through use by Cypress. Cypress challenged this Office Action on May 2, 2011, but the Trademark Office maintained its rejection on the same grounds and issued its Final Refusal on May 25, 2011.
- From June 17, 2002, to and including May 25, 2011, Cypress knew that the 55. Trademark Office had continuously refused to accept its application to register "QDR" as a trademark and that it was "merely descriptive" and "not distinctive." Cypress nonetheless made continuous public assertions that it possessed enforceable trademark rights to "QDR," which were false misrepresentations of fact and an unfair business practice intended to further entrench its customer lock in and chill the development and sale of competing Networking SRAM under the generic and well-known acronym of "QDR." For example, in March 2004, Cypress demanded that GSI "cease and desist" from using "QDR" in connection with the promotion of its Networking SRAM before a JEDEC Committee, claiming that "Cypress is the owner of the family of QDR trademarks." In truth and fact, Cypress knew that "QDR" did not constitute a protectable trademark proprietary to Cypress or Consortium members, and knew that it had no legal right to demand that GSI cease and desist using a descriptive or generic acronym that merely described a Networking SRAM product. Cypress's continuous course of conduct during the period 2002 to 2011 in publicly asserting that it has a trademark in the "QDR" acronym has harmed GSI by its resulting inability to promote its quad data rate products as QDR products.

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THE ANTICOMPETITIVE EFFECTS OF CYPRESS'S CONDUCT ON PLAINTIFF, COMPETITION AND CONSUMERS

By their conduct, the Consortium members excluded GSI and other competitors by 56. jointly combining their market power to create exclusive but de facto product standards, to lock in customers for Networking SRAM and to manipulate the availability of information about product definitions to impede and delay GSI's and other competitors' entry into the Networking SRAM market. In 2003, GSI introduced its first Quad/DDR SRAM product, but due to its late arrival it fared poorly in the market. Although GSI was able to introduce a minimally competitive Networking SRAM product in 2006, and from 2007 to 2010 introduced succeeding higher density and faster products, GSI was unable to gain market acceptance as a result of the conduct alleged. In 2010, GSI introduced a third generation Quad and DDR SRAM family marketed as SigmaQuad-IIIe SRAMs, a product that doubled the performance capabilities of the QDR II+ SRAMs. Whether this product will gain market acceptance remains uncertain due to Cypress' Cypress' continuing lock in of customers and collusion with Consortium members. anticompetitive conduct and refusal to engage in open and public standard setting have caused, and are causing, continuing damage to GSI and to competition.

- 57. As a result of the anticompetitive conduct alleged above, Cypress has in fact illegally delayed and impeded GSI's ability to develop and market competitive products and has stifled innovation in the Networking SRAM market to the injury of GSI, other competitors and competition and to the detriment of customers and consumers.
- 58. The Consortium's successful exclusion of GSI as a competitor in the Networking SRAM market was continuous from 2000 to date and prevented GSI from accurately calculating, knowing or reasonably projecting the actual volume of business, market share or profits it would have achieved or enjoyed in an open and competitive market free of the anticompetitive conduct of Cypress and its co-conspirators and its resulting restraints. As a direct result of Cypress' and the Consortium members' illegal and continuing combination and conspiracy from 2000 to 2011, GSI was previously incapable of determining or quantifying the damages and injury it suffered because it previously had not experienced or known the size and conditions of an emerging

market that was effectively free of the anticompetitive effects of the illegal restraints of trade. Any attempt to state a claim to recover the full extent of GSI's future market share damage would have been speculative and conjecture.

59. Cypress and members of the Consortium through their acts and conduct have illegally dominated and controlled the Networking SRAM market to the further injury of GSI, competition and to the detriment of their customers and consumers.

FIRST CLAIM FOR RELIEF

(Violation of Section 1 of the Sherman Act—

Combination and Conspiracy In Restraint Of Trade)

- 60. Plaintiff GSI incorporates by this reference each and every allegation of paragraphs 1-59 above.
- 61. Plaintiff GSI is informed and believes and based thereon alleges that Defendant Cypress and its co-conspirators have at all times relevant hereto, including the present, possessed substantial market power in the Networking SRAM market.
- 62. Cypress and its co-conspirators agreed, combined and conspired to form the QDR Consortium, the intended purpose of which was and is to harm or eliminate competitors of the members of the Consortium.
- 63. In furtherance of the conspiracy, the Consortium members secretly developed among themselves, and for their mutual benefit, de facto standards outside of any open and public standard setting organizations to enable them to gain and maintain their monopoly share of the Networking SRAM market by exchanging information and by agreeing collectively on, and sharing with each other, product development plans for their respective products. Each member of the Consortium had full access to substantially complete form, fit and function specifications and information that was particular to their planned family of Networking SRAM at each stage up to and including the announced release of QDR II+ Xtreme. By excluding their existing, new or potential competitors from the emerging Networking SRAM market and by their concerted refusal to participate in industry accepted public and open standard setting processes, competitors did not have timely access to form, fit and function specifications and information that would

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| have been | available | in | an | open | standard | setting | process | such | as | those | conducted | by | IEEE | 0 |
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| IEDEC. | | | | | | | | | | | | | | |

- The illegal conspiracy and collusion among the Consortium members allowed 64. them to reap the benefits of standardization among themselves and to restrain trade and monopolize the lucrative market for Networking SRAM by excluding all of their non-member competitive vendors from the market and locking in contracts with key customers. Consortium's control of the market had the effect of keeping Networking SRAM prices high, locking in the limited number of consumers of Networking SRAM before competitors could develop and market competing products and stalling the introduction of innovative competitive products.
- As more fully alleged above, the independent, continuous and illegal overt acts 65. undertaken by Cypress and members of the Consortium in furtherance of the conspiracy include, without limitation, the following:
- agreeing to develop product standards among themselves as the top (a) vendors of Networking SRAM in a non-public, collusive effort to lock in major customers before their competitors could develop a competitive product;
- excluding GSI from participation in standard setting to delay its ability to (b) enter the market;
- repeatedly exercising Cypress' veto power in 1999, 2003, 2004, 2008 and (c) 2011 to exclude and injure GSI as a competitor from participating in the Consortium's standard setting;
- engaging in a group boycott or concerted refusal to deal with GSI and other (d) non-member competitors;
- meeting and exchanging information regarding product development, (e) sharing proprietary research and development information, delaying publication of data sheets to delay entry of GSI and other competitors' products and announcing new products without any intention of introducing them in the market in order to stifle innovation and competition and extend the lock in with customers;

| (f) | selectively adding new members who would have otherwise threatened to |
|---------------------|--|
| compromise the ef | ffectiveness of the Consortium or who enhanced the image of the Consortiun |
| but had no strong U | J.S. presence; |

- (g) collectively designing, developing, introducing and enhancing new products resulting from their conspiratorial efforts;
- (h) cross-licensing each others' patents or other intellectual property related to QDR SRAMs and/or DDR SRAMs and circumventing JEDEC's standards setting RAND rule and Patent Policy;
- (i) refusing to participate in open standard setting while conspiring together to set product standards that would be available first only to Consortium members in order to delay other competitors' market entry;
- (j) representing that "QDR" and "quad data rate" were Cypress or Consortium trademarks to preclude other competitors from using these generic designations for their products to injure or exclude them altogether from the market from at least 2002 to the present.
- market has been—and continues to be—affected by the anticompetitive collusive and conspiratorial conduct of Cypress and its co-conspirators, and this conduct has inflicted and continues to inflict significant damage and injury on GSI, other competitors and their respective customers, as well as the integrated circuits industry in general consisting of lost market share, lost revenue and lost technological product innovation that never came to market as a direct result of the Consortium's conspiracy that delayed and impeded effective and timely research and development.
- 67. As a result of the anticompetitive collusive and conspiratorial conduct of Cypress and its co-conspirators in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1, Plaintiff has been injured and continues to be injured in its business and property in an amount to be determined at trial, which amount shall be trebled in accordance with 15 U.S.C. § 15.
- 68. As a result of the anticompetitive collusive and conspiratorial conduct of Cypress and its co-conspirators in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1, Plaintiff has

suffered and will continue to suffer irreparable harm unless Defendant is restrained and enjoined from continuing its wrongful actions intended to destroy Plaintiff's business reputation and goodwill and unless this Court orders Defendant to cease and desist the conduct alleged herein on such terms as are just and reasonable.

SECOND CLAIM FOR RELIEF

(Violation of California Business & Professions Code

Sections 16720 and 16726—for Unlawful Restraints of Trade)

- 69. Plaintiff GSI incorporates by this reference each and every allegation of paragraphs 68 above.
- 70. Defendant Cypress' anticompetitive conduct as alleged herein constitutes a violation of Section 16720 and 16726 of the California Business and Professions Code.
- 71. A not insubstantial amount of intrastate and interstate commerce in the relevant market has been—and continues to be—affected by Cypress' illegal conduct, and Cypress' conduct has harmed GSI and has harmed competition.
- 72. As a result of Cypress' violations of Section 16720 and 16726 of the California Business & Professions Code, GSI has been injured and continues to be injured in its business and property in an amount to be determined at trial, which amount is to be trebled in accordance with Section 16750 of the California Business & Professions Code.
- 73. As a result of Cypress' conduct and actions in violation of Sections 16720 and 16726 of the California Business & Professions Code, Plaintiff has suffered and will continue to suffer irreparable harm unless Defendant is restrained and enjoined from continuing its wrongful actions intended to destroy Plaintiff's business reputation and goodwill and unless this Court orders Defendant to cease and desist the conduct herein alleged on such terms as are just and reasonable.

THIRD CLAIM FOR RELIEF

(Violation of California Business & Professions Code

Sections 17200 et seq.—Unfair Competition)

74. Plaintiff GSI incorporates by this reference each and every allegation of

1 paragraphs 73 above.

- 75. Defendant Cypress' conduct as alleged herein constitutes unlawful and/or unfair acts or practices in violation of California Business & Professions Code section 17200 et seq. Among other acts, Cypress has violated the Sherman Act (15 U.S.C. § 1 et seq.), the Clayton Act (15 U.S.C. § 12 et seq.), and the Cartwright Act (Cal. Bus. & Prof. Code § 16700 et seq.), by the unlawful conduct described hereinabove.
- 76. By its willful acts to exclude GSI from the market and to harm GSI and other competitors in the Networking SRAM market in violation of the federal and California antitrust laws, Cypress has engaged in unlawful and unfair business practices in violation of California Business and Professions Code section 17200, et seq.
- 77. As a direct and proximate result of the foregoing unlawful and unfair agreements, acts and practices of Cypress, Plaintiff has suffered and will continue to suffer irreparable harm, to its business and property and to its business reputation and good will.
- 78. Defendant Cypress intends to continue its wrongful actions and unless restrained and enjoined, will do so. Plaintiff's remedy at law is inadequate to compensate GSI for the harm inflicted and threatened by Defendant.

PRAYER

WHEREFORE, PLAINTIFF GSI PRAYS for judgment against Defendant Cypress as follows:

- 1. For treble damages in an amount to be determined at trial on the First and Second Claims for Relief.
- 2. For entry of a preliminary and permanent injunction on all Claims for Relief prohibiting Defendant Cypress, its officers, directors, employees, and all persons acting in concert with them or on Defendant's behalf from pursuing the acts, practices and policies complained of herein, including agreeing on non-public product standards with its competitors or engaging in anticompetitive conduct to exclude, eliminate or harm GSI or other competitors or potential competitors and prohibiting Defendant from continuing its unfair and illegal business acts and practices.

For attorneys' fees and costs incurred in this action. 3. 1 For such other and further relief as the Court deems just and proper. 2 4. 3 SHARTSIS FRIESE LLP DATED: July 22, 2011 4 5 6 Attorneys for Plaintiff 7 GSI TECHNOLOGY, INC., a Delaware corporation 8 **DEMAND FOR JURY TRIAL** 9 In accordance with Rule 38(b) of the Federal Rules of Civil Procedure, GSI hereby 10 demands a trial by jury on all issues triable by a jury. 11 12 SHARTSIS FRIESE LLP DATED: July 22, 2011 13 14 15 Attorneys for Plaintiff 16 GSI TECHNOLOGY, INC., a Delaware Corporation 17 8301\001\1730006 18 19 20 21 22 23 24 25 26 27 28

COMPLAINT FOR FEDERAL AND STATE
ANTITRUST VIOLATIONS; UNFAIR COMPETITION